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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,126	07/08/2003	Dennis G. Hepp	CARDIO.003CP1C1	2220

7590 01/26/2006

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San Diego, CA 92127

EXAMINER

GETZOW, SCOTT M

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

58

Office Action Summary	Application No.	Applicant(s)	
	10/616,126	HEPP ET AL.	
	Examiner	Art Unit	
	Scott M. Getzow	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-21, 32-36, 40-42, 46-48, 60-68, 70, 74-79 and 87-101 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-21, 32-36, 40-42, 46-48, 60-68, 70, 74-79 and 87-101 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/8/05, 6/1/04, 7/8/03</u> | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4,8-15,17-20,60-62,64,65,68,70,74-79,87,88,101 are rejected under 35 U.S.C. 102(b) as being anticipated by Segalowitz (5511553).

Col. 40 of Segalowitz teaches detecting cardiac output through impedance cardiography, using an electric current that is applied to the body. Also, the calculation of VET is mentioned. Col. 21, lines 35+ teaches the ability to subtract noise from the sensed signals. Col. 22, lines 1-10 teach the use of pins to connect memory elements to a given structure. Col. 23, lines 1+ teach multiplexers and A-D converters and processing software that is resident in the ROM. Col. 24, lines 55+ teach digital signal processing. Col. 28, line 23 teaches portability in the form of a Holter monitor. Col. 28, lines 50+ teaches identification and removal of artifact in the signals, and col. 31, lines 60+ teaches filtering to remove unwanted artifacts. Col. 41, lines 10+ teach processing software resident in a computer as well as the well-known equation for the calculation for cardiac output. Col. 43, lines 5-10 teach a multi-pin module that can be connected to a computer interface.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz in view of Reining (5505209).

Segalowitz teaches all of the subject matter of the above claim except for a constant current generator. Reining teaches a constant current generator 18, used in impedance cardiography. It would have been obvious to use such a generator since it can cause less tissue burn when the impedance of the tissue changes, and such a generator is commonly used in the art for ICG. Further, using first and second digital signal processors would allow for quicker calculations and therefore a more error free and faster evaluation of the patient

5. Claims 32-34,36,40-42,46-48,66,67,89-93,95-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz.

The methodology of the above claims is deemed to have been obvious to the ordinary artisan when using the device of Segalowitz as intended. Re claim 40, the R wave is the most prominent part of the ECG and therefore would be obvious to use to evaluate signal quality. Re claim 89, the ordinary artisan would understand that computer programs are routinely partitioned into a plurality of

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different modules, depending on the specific tasks that are to be performed, such as a processing module and a communications module. Re claim 97, see col. 7, lines 52+ which teaches use in a hospital setting. Typically pluralities of patients are monitored simultaneously from a central station, such as a nurse's station, when in a hospital setting.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz in view of Hochman (6671540).

Segalowitz teaches all of the subject matter of the above claims except for a pipelined processor core. Such an element is taught in Hochman col. 21, lines 64+. It would have been obvious to use such with the device of Segalowitz in order to increase processing speed, as is well known in the art.

7. Claims 6,7,35,63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz in view of Ko (6135966).

Segalowitz teaches all of the subject matter of the above claims except for the use of wavelet transform. Ko teaches the use of wavelet transform, col. 6, lines 43+. It would have been obvious to use such for reasons mentioned in Ko, and that such transforms are commonly used in the art.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

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and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

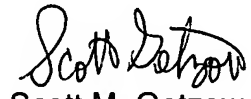
9. Claims 1-15,17-21,32-36,40-42,46-48,60-68,70,74-79,87-101 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-51 of U.S. Patent No. 6,602,201. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application are considered to have been obvious over the claims of the parent patent; see above rejections regarding the use of additional references.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Getzow whose telephone number is (571) 272-4946. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Scott M. Getzow
Primary Examiner
Art Unit 3762

SMG